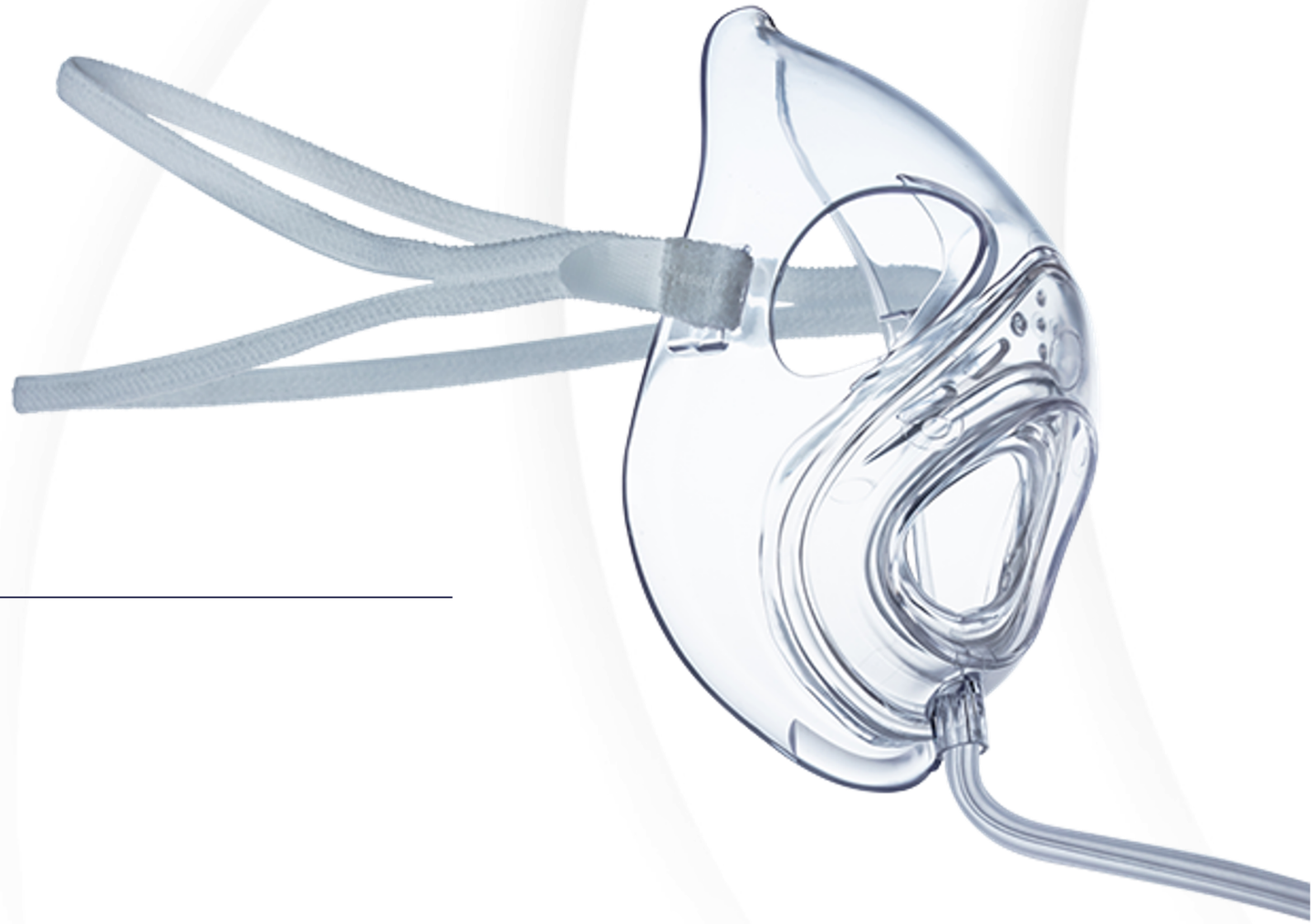
vyaire™ MEDICAL



One oxygen solution for all your oxygen delivery needs

AirLife™ Open

BEGIN

Dyspnoea

Dyspnoea is a common symptom 7,4% of patients in emergency admission are affected[1] .

It can arise from many different underlying conditions and is sometimes a manifestation of a life-threatening disease.

The common cause of dyspnoea in hospital emergency room:

- COPD (16,5%)
- Heart failure (16,1%)
- Pneumonia (8,8%)
- Myocardial infarction (5,3%)
- Atrial fibrillation of flutter (4,9%)
- Malignant tumor (3,3%)
- Pulmonary embolism (3,3%)

The administration of supplemental oxygen is an essential element of appropriate management for a wide range of clinical conditions, crossing different medical and surgical specialities[2].

Dyspnoea – Life threatening and high Mortality rate

Patients experience Dyspnoea as deeply threatening, they have an overwhelming feeling of 'air hunger' that can be likened to drowning.

As a result, when traditional closed masks are applied to their faces, they believe they will suffocate and so may struggle and fight against them.

During this stressful time the Patient has to answer a lot of questions and so every time they try to speak to the caregiver, they typically remove the mask and so the oxygen therapy stops leading to potential desaturation.

Acute respiratory distress is due to a cardiac or pulmonary issue, in any case the application of O_2 is essential.

Low ambulatory oxygen saturation leads to high oxygen requirement.

Dyspnoea – Emergency

Dyspneic patients in the emergency room require a wide differential diagnosis while providing appropriate initial treatment for a potentially life threatening illness.

Airway, breathing, and circulation are the primary focus when beginning management of the acutely dyspneic patient.

What this may mean using multiple interfaces, each one taking time to see how it changes the patients oxygenation. When an oxygen mask is used the patient might struggle against it, it may not achieve the desired oxygenation and so another interface is needed. Multiple interfaces could mean several trips to the store room. Each time the patient is left alone they could remove the mask due to comfort or panic and so could increase the likelihood of their situation worsening.

Only when the patient has stabilized further clinical investigation and treatment can proceed.

Choosing the right oxygen therapy product can save valuable time and effort.

BTS Guidelinefor oxygen use in adults in healthcare and emergency settings

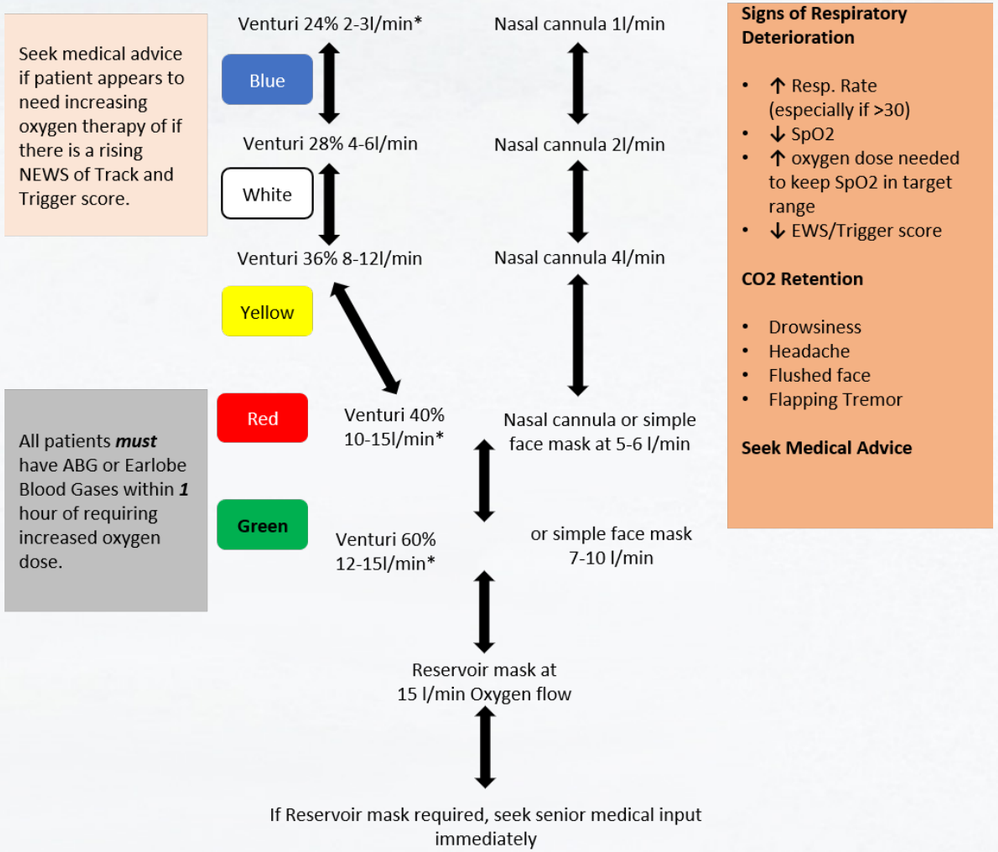
The decision tree on the right illustrates the therapy choices and pathway once ABG results are known.

Where AirLife™ Open can help improve the situation for the patient and clinician is in the time before the ABG results are known.

This is because the Open design of the mask is comfortable and well tolerated by the patient which may reduce the liklihood of them strugging or removing the mask.

Because AirLife™ Open can deliver FiO_2 from 21 to over 85% it may help achieve the desired SpO_2 more quickly as there is no need to keep selecting additional interfaces.

Once ABG tests are complete, if the guidelines suggest continued oxygen therapy then the AirLife™ Open is already in position and can be utilised across a wide range of oxygen flows / concentrations to deliver the desired FiO_2.



***For venturi masks, the higher flow rate is required if the respiratory rate is >30**

Patients in peri-arrest situation and critically ill patients should be given oxygen therapy at 15l/min via reservoir or bag-valve mask whilst immediate medical help is arriving.

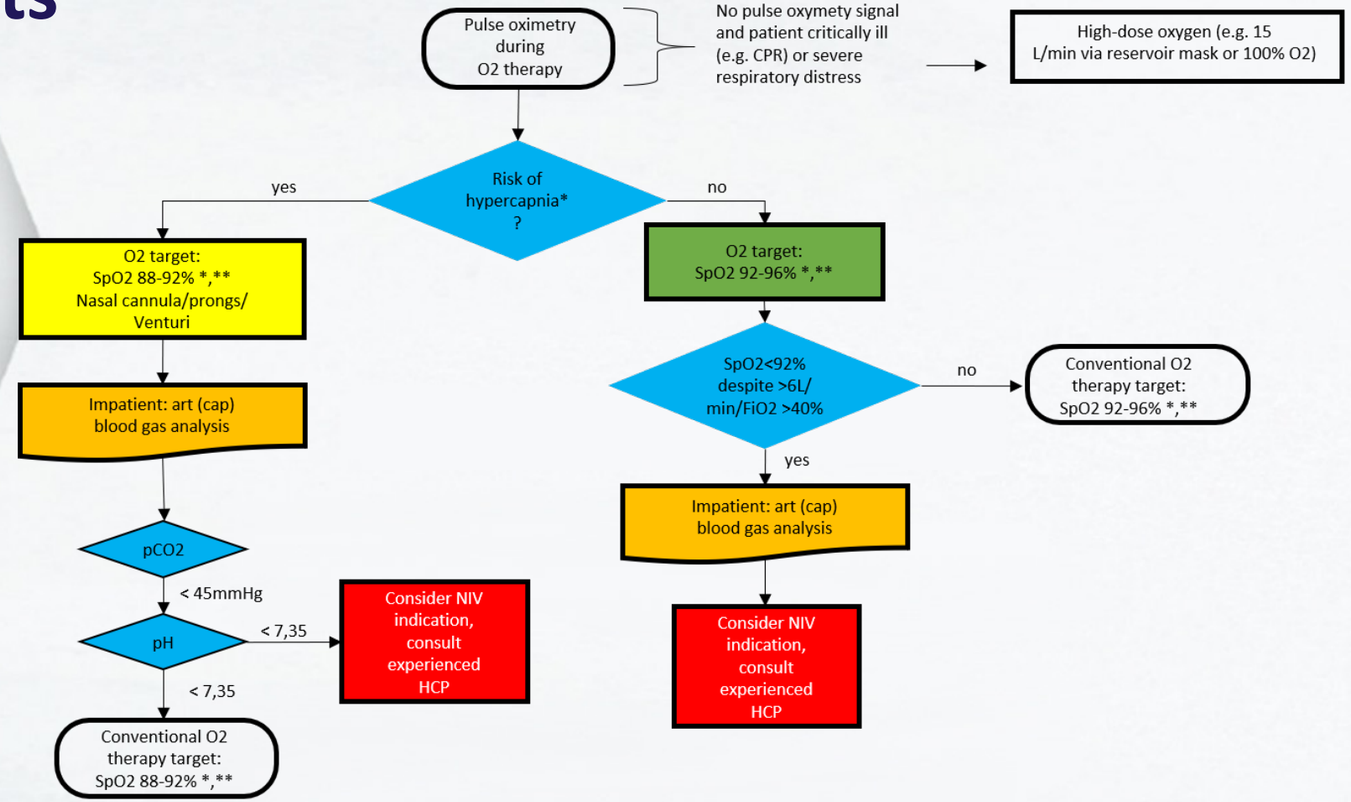
Except for patients with COPD with known oxygen sensitivity recorded in patient's case notes and drug chart or in the Electronic Patient Record (EPR): keep saturation at 88-92% for this sub-group of patients

S3 Guideline: Oxygen Therapy in the Acute Treatment of Adult Patients

The German Guidelines give almost identical guidance to the BTS oxygen therapy guidelines.

This diagram additionally illustrates where the ABG sample is taken during the patient diagnosis and treatment flow.

To compliment this AirLife™ Open help can reduce complexity and improve patient care during the early phases of diagnosis but can also continue to be deployed after the ABG results should the guidelines suggest oxygen therapy continue to be used.



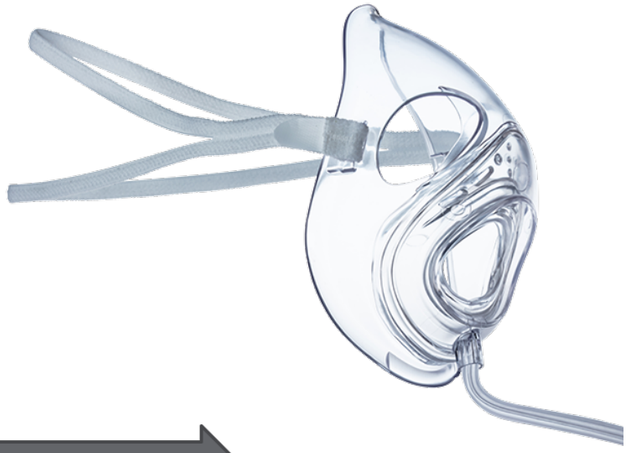
*e.g., COPD, BMI > 40 kg/m2, cystic fibrosis, adults with neuromuscular or chest wall disorders.
Do not start O2 below SpO2 88% or 92%, respectively
Stop or reduce O2 above 92% or 96%, respectively
O HCP experienced in the diagnosis and treatment of patients with respiratory failure or critically ill patients
CPR – cardiopulmonary resuscitation; SpO2 – oxygen saturation as measured by pulse oximetry; O2 – oxygen; NIV – non-invasive ventilation, HFNC – high-flow oxygen, BMI – body mass index; art. – arterial; cap – capillary; pCO2 – partial pressure of carbon dioxide

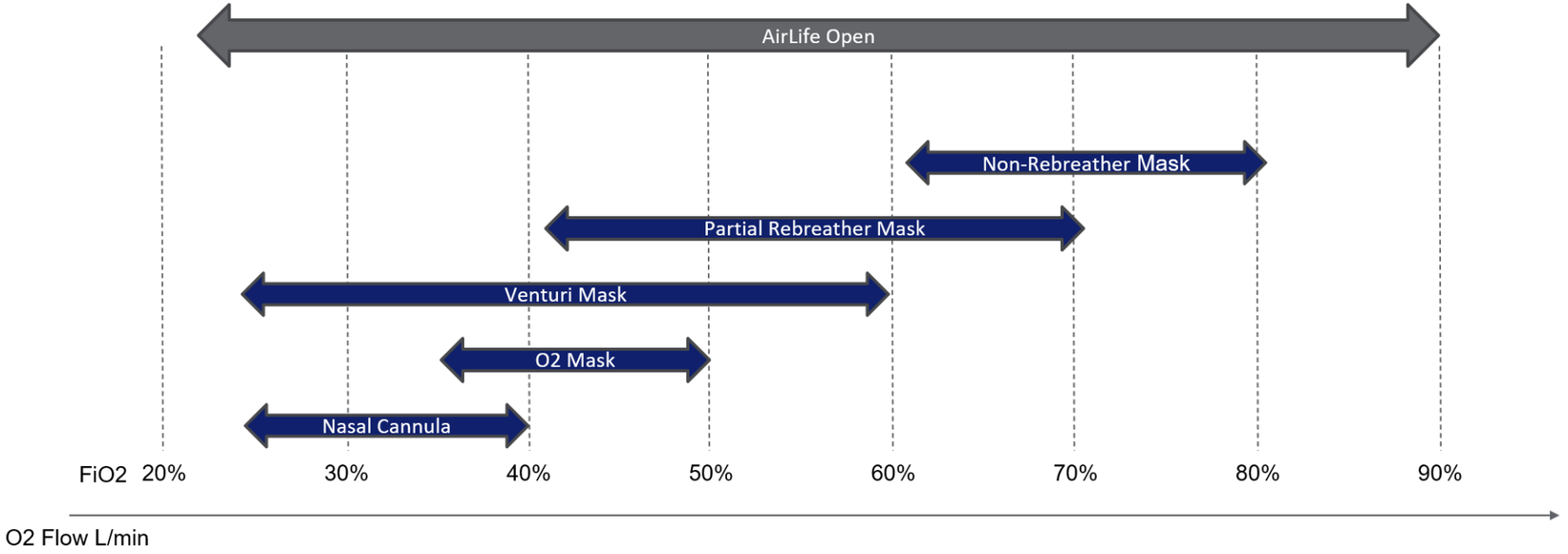
AirLife™ Open

The goal of oxygen administration is to achieve adequate tissue oxygenation. Selection of the oxygen delivery device and flow is targeted to meet specific physiologic needs and therapeutic goals of each patient.

The multiple patient and clinical complexities in handling severely dyspnoeic patients can often be compounded by using multiple oxygen therapy interfaces.

AirLife™ Open covers all these needs in one mask.

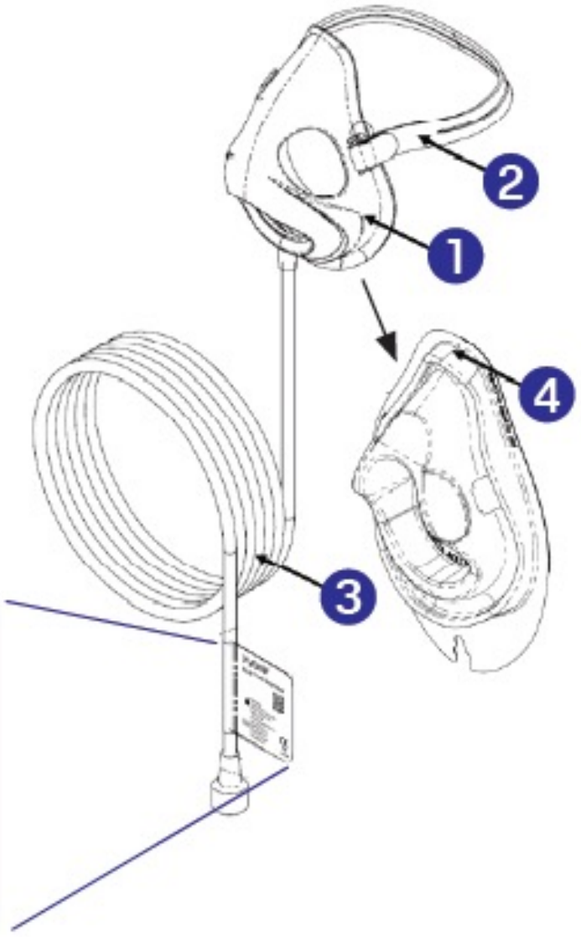


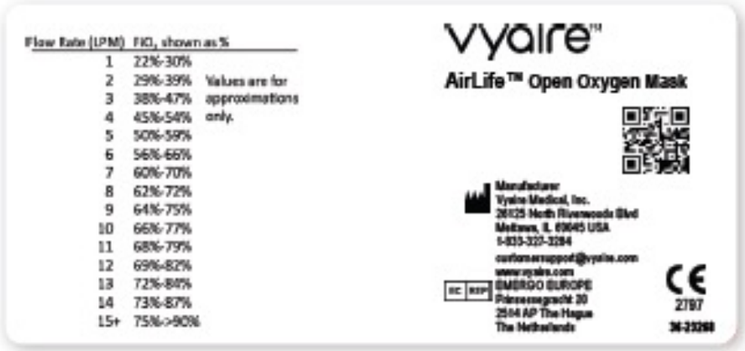


AirLife™ Open

- FiO_2 adjustable by Flow rate

1. Mask
2. Head Strap
3. Oxygen Tubing
4. Protective Packaging



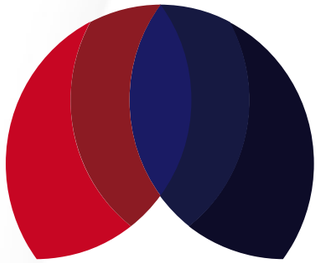


Flow Rate (LPM)	FiO, shown as %	
1	22%-30%	
2	29%-39%	Values are for
3	38%-47%	approximations
4	45%-54%	only.
5	50%-59%	
6	56%-66%	
7	60%-70%	
8	62%-72%	
9	64%-75%	
10	66%-77%	
11	68%-79%	
12	69%-82%	
13	72%-84%	
14	73%-87%	
15+	75%->90%	

REFERENCES:

1. Mockel et al., European Journal of Emergency Medicine 2013, 20:103–108
2. Natl J Maxillofac Surg. 2011 Jan-Jun; 2(1): 10–14.
3. Mockel et al., European Journal of Emergency Medicine 2013, 20:103–108
4. BTS Guideline for oxygen use in adults in healthcare and emergency settings, June 2017 Volume 72 Supplement 1

BACK



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